

# GREENHOUSE HORTICULTURE, TESTAMUR MAJOR (T107)

Western Sydney University Major Code: T107

Previous Code: ST3078.1

## Available to students in other Western Sydney University

**Programs:** Yes. Check that your program has the available credit points required to complete the subjects in this field of study. Any requisite requirements must also be met. Consult your Program Advisor for further advice.

This postgraduate major is designed for science graduates interested in a career in horticulture, protected cropping, greenhouse technology, postharvest technology, and agricultural biotechnology, working in a variety of settings such as food production, research and development, technical and senior management. This unique opportunity in greenhouse horticulture offers students exciting learning opportunities to develop expertise to meet future challenges to food supply, crop management, greenhouse control systems, and integrated pest management in a world-class greenhouse facility. Students will meet with industry experts and growers in becoming professional horticultural researchers with the technical and critical thinking skills to solve complex real-world problems and articulate appropriate solutions. A capstone subject involving either a research or professional industry project allows students to integrate their knowledge and skills developed from the whole program.

## Location

| Campus            | Mode     | Advice                    |
|-------------------|----------|---------------------------|
| Hawkesbury Campus | Internal | Science@westernsydney.edu |

## Major Structure

Qualification for the award of Master of Science (Greenhouse Horticulture) requires the successful completion of 160 credit points comprising:

- 20 credit points of core subjects,
- 20 credit points of research capstone subjects,
- 40 credit points of major subjects as follows

| Subject                    | Title   | Credit Points |
|----------------------------|---|---------------|
| HORT 7001                  | Advanced Greenhouse Technology                        | 10            |
| HORT 7002                  | Greenhouse Control Systems                            | 10            |
| HORT 7003                  | Greenhouse Crop Production                            | 10            |
| HORT 7006                  | Plant-Climate Interactions in Controlled Environments | 10            |
| <b>Total Credit Points</b> |   | <b>40</b>     |

- and at least 40 credit points from Alternate Pool 1 and up to 40 credit points from Alternate Pool 2.

Students should note that the subjects available in Alternate Pool 1 and Alternate Pool 2 are listed under the Structure tab of the Master of Science (<https://hbook.westernsydney.edu.au/archives/2024-2025/programs/master-science/>) page.

## Recommended Sequence Current Master of Science full-time start-year intake

| Course  | Title   | Credit Points |
|---|---|---------------|
| <b>Year 1</b>   |   |               |
| <b>Autumn session</b>   |   |               |
| HORT 7002   | Greenhouse Control Systems                            | 10            |
| HORT 7003   | Greenhouse Crop Production                            | 10            |
| Select two alternate subjects   |   | 20            |
| <b>Credit Points</b>  |   | <b>40</b>     |
| <b>Spring session</b>   |   |               |
| HORT 7006   | Plant-Climate Interactions in Controlled Environments | 10            |
| HORT 7001   | Advanced Greenhouse Technology                        | 10            |
| MATH 7016   | The Nature of Data                                    | 10            |
| Select one alternate subject  |   | 10            |
| <b>Credit Points</b>  |   | <b>40</b>     |
| <b>Year 2</b>   |   |               |
| <b>Autumn session</b>   |   |               |
| NATS 7055   | Experiment Design and Project Management              | 10            |
| Select three alternate subjects   |   | 30            |
| <b>Credit Points</b>  |   | <b>40</b>     |
| <b>Spring session</b>   |   |               |
| Select 20 credit points from the following (note that MSc Research Project is a 20 credit point subject): |   | 20            |
| NATS 7033   | MSc Research Project                                  |               |
| NATS 7054   | Professional Topic                                    |               |
| NATS 7057   | Research Preparation in Post Graduate Studies         |               |
| Select two alternate subjects   |   | 20            |
| <b>Credit Points</b>  |   | <b>40</b>     |
| <b>Total Credit Points</b>  |   | <b>160</b>    |

## Master of Science full-time mid-year intake

| Course  | Title   | Credit Points |
|---|---|---------------|
| <b>Year 1</b>   |   |               |
| <b>Spring session</b>   |   |               |
| HORT 7006   | Plant-Climate Interactions in Controlled Environments | 10            |
| HORT 7001   | Advanced Greenhouse Technology                        | 10            |
| Select two alternate subjects   |   | 20            |
| <b>Credit Points</b>  |   | <b>40</b>     |
| <b>Autumn session</b>   |   |               |
| HORT 7002   | Greenhouse Control Systems                            | 10            |
| HORT 7003   | Greenhouse Crop Production                            | 10            |
| Select two alternate subjects   |   | 20            |
| <b>Credit Points</b>  |   | <b>40</b>     |
| <b>Year 2</b>   |   |               |
| <b>Spring session</b>   |   |               |
| MATH 7016   | The Nature of Data                                    | 10            |
| Select 20 credit points from the following (note that MSc Research Project is a 20 credit point subject): |   | 20            |
| NATS 7033   | MSc Research Project                                  |               |
| NATS 7054   | Professional Topic                                    |               |

|                                 |   |            |
|---------------------------------|---|------------|
| NATS 7057                       | Research Preparation in Post Graduate Studies |            |
| Select one alternate subject    |   | 10         |
| <b>Credit Points</b>            |   | <b>40</b>  |
| <b>Autumn session</b>           |   |            |
| NATS 7055                       | Experiment Design and Project Management      | 10         |
| Select three alternate subjects |   | 30         |
| <b>Credit Points</b>            |   | <b>40</b>  |
| <b>Total Credit Points</b>      |   | <b>160</b> |

## Major in other postgraduate programs, full-time start-year intake

Students undertaking the major as part of a postgraduate program other than the Master of Science must complete 40 credit points of specialisation subjects.

| Course                     | Title   | Credit Points |
|----------------------------|---|---------------|
| <b>Year 1</b>              |   |               |
| <b>Autumn session</b>      |   |               |
| HORT 7002                  | Greenhouse Control Systems                            | 10            |
| HORT 7003                  | Greenhouse Crop Production                            | 10            |
| <b>Credit Points</b>       |   | <b>20</b>     |
| <b>Spring session</b>      |   |               |
| HORT 7001                  | Advanced Greenhouse Technology                        | 10            |
| HORT 7006                  | Plant-Climate Interactions in Controlled Environments | 10            |
| <b>Credit Points</b>       |   | <b>20</b>     |
| <b>Total Credit Points</b> |   | <b>40</b>     |

## Major in other postgraduate programs, full-time mid-year intake

Students undertaking the major as part of a postgraduate program other than the Master of Science must complete 40 credit points of specialisation subjects.

| Course                     | Title   | Credit Points |
|----------------------------|---|---------------|
| <b>Year 1</b>              |   |               |
| <b>Spring session</b>      |   |               |
| HORT 7001                  | Advanced Greenhouse Technology                        | 10            |
| HORT 7006                  | Plant-Climate Interactions in Controlled Environments | 10            |
| <b>Credit Points</b>       |   | <b>20</b>     |
| <b>Autumn session</b>      |   |               |
| HORT 7002                  | Greenhouse Control Systems                            | 10            |
| HORT 7003                  | Greenhouse Crop Production                            | 10            |
| <b>Credit Points</b>       |   | <b>20</b>     |
| <b>Total Credit Points</b> |   | <b>40</b>     |

## Equivalent Subject

The subject listed below counts towards completion of this major for students who passed this subject in 2021 or earlier.

ENGR 7018 - Research Preparation in Post Graduate Studies, replaced by NATS 7057 Research Preparation in Post Graduate Studies

## Recommended Sequence 2023

### Master of Science full-time start-year intake

| Course  | Title   | Credit Points |
|---|---|---------------|
| <b>Year 1</b>   |   |               |
| <b>Autumn session</b>   |   |               |
| HORT 7002   | Greenhouse Control Systems                            | 10            |
| HORT 7003   | Greenhouse Crop Production                            | 10            |
| Select two alternate subjects   |   | 20            |
| <b>Credit Points</b>  |   | <b>40</b>     |
| <b>Spring session</b>   |   |               |
| HORT 7001   | Advanced Greenhouse Technology                        | 10            |
| HORT 7006   | Plant-Climate Interactions in Controlled Environments | 10            |
| MATH 7016   | The Nature of Data                                    | 10            |
| Select one alternate subject  |   | 10            |
| <b>Credit Points</b>  |   | <b>40</b>     |
| <b>Year 2</b>   |   |               |
| <b>Autumn session</b>   |   |               |
| NATS 7055   | Experiment Design and Project Management              | 10            |
| Select three alternate subjects   |   | 30            |
| <b>Credit Points</b>  |   | <b>40</b>     |
| <b>Spring session</b>   |   |               |
| Select 20 credit points from the following (note that MSc Research Project is a 20 credit point subject): |   | 20            |
| NATS 7033   | MSc Research Project                                  |               |
| HORT 7004   | Industry Project                                      |               |
| HORT 7005   | Industry Project (Extended)                           |               |
| NATS 7054   | Professional Topic                                    |               |
| NATS 7057   | Research Preparation in Post Graduate Studies         |               |
| Select two alternate subjects   |   | 20            |
| <b>Credit Points</b>  |   | <b>40</b>     |
| <b>Total Credit Points</b>  |   | <b>160</b>    |

### Master of Science full-time mid-year intake

| Course                        | Title   | Credit Points |
|-------------------------------|---|---------------|
| <b>Year 1</b>                 |   |               |
| <b>Spring session</b>         |   |               |
| HORT 7001                     | Advanced Greenhouse Technology                        | 10            |
| HORT 7006                     | Plant-Climate Interactions in Controlled Environments | 10            |
| MATH 7016                     | The Nature of Data                                    | 10            |
| Select one alternate subject  |   | 10            |
| <b>Credit Points</b>          |   | <b>40</b>     |
| <b>Autumn session</b>         |   |               |
| Select one alternate subjects |   | 10            |
| HORT 7002                     | Greenhouse Control Systems                            | 10            |
| HORT 7003                     | Greenhouse Crop Production                            | 10            |
| NATS 7055                     | Experiment Design and Project Management              | 10            |
| <b>Credit Points</b>          |   | <b>40</b>     |

**Year 2****Spring session**

Select 20 credit points from the following (note that MSc Research Project is a 20 credit point subject): 20

|           |   |
|-----------|---|
| NATS 7033 | MSc Research Project                          |
| HORT 7004 | Industry Project                              |
| HORT 7005 | Industry Project (Extended)                   |
| NATS 7054 | Professional Topic                            |
| NATS 7057 | Research Preparation in Post Graduate Studies |

Select two alternate subjects 20

**Credit Points 40**

**Autumn session**

Select four alternate subjects 40

**Credit Points 40**

**Total Credit Points 160**

**Major in other postgraduate programs, full-time start-year intake**

Students undertaking the major as part of a postgraduate program other than the Master of Science must complete 40 credit points of specialisation subjects.

| Course | Title | Credit Points |
|--------|-------|---------------|
|--------|-------|---------------|

**Year 1****Autumn session**

|                      |                            |           |
|----------------------|----------------------------|-----------|
| HORT 7002            | Greenhouse Control Systems | 10        |
| HORT 7003            | Greenhouse Crop Production | 10        |
| <b>Credit Points</b> |                            | <b>20</b> |

**Spring session**

|                            |   |           |
|----------------------------|---|-----------|
| HORT 7001                  | Advanced Greenhouse Technology                        | 10        |
| HORT 7006                  | Plant-Climate Interactions in Controlled Environments | 10        |
| <b>Credit Points</b>       |   | <b>20</b> |
| <b>Total Credit Points</b> |   | <b>40</b> |

**Major in other postgraduate programs, full-time mid-year intake**

Students undertaking the major as part of a postgraduate program other than the Master of Science must complete 40 credit points of specialisation subjects.

| Course | Title | Credit Points |
|--------|-------|---------------|
|--------|-------|---------------|

**Year 1****Spring session**

|                      |   |           |
|----------------------|---|-----------|
| HORT 7001            | Advanced Greenhouse Technology                        | 10        |
| HORT 7006            | Plant-Climate Interactions in Controlled Environments | 10        |
| <b>Credit Points</b> |   | <b>20</b> |

**Autumn session**

|                            |                            |           |
|----------------------------|----------------------------|-----------|
| HORT 7002                  | Greenhouse Control Systems | 10        |
| HORT 7003                  | Greenhouse Crop Production | 10        |
| <b>Credit Points</b>       |                            | <b>20</b> |
| <b>Total Credit Points</b> |                            | <b>40</b> |

**Equivalent Subject**

The subject listed below counts towards completion of this major for students who passed this subject in 2021 or earlier.

ENGR 7018 - Research Preparation in Post Graduate Studies, replaced by NATS 7057 Research Preparation in Post Graduate Studies

**Related Programs**

Master of Science (3749) (<https://hbook.westernsydney.edu.au/archives/2024-2025/programs/master-science/>)